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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/682,201	10/10/2003	Esmond Ho	15520-US-CONT	1251
23553 MARKS & CLERK P.O. BOX 957 STATION B OTTAWA, ON K1P 5S7 CANADA	7590 05/01/2007		EXAMINER JAIN, RAJ K	
			ART UNIT 2616	PAPER NUMBER
			MAIL DATE 05/01/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/682,201	Applicant(s) HO ET AL.	
	Examiner Raj K. Jain	Art Unit 2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claim(s) 1-4 rejected under 35 U.S.C. 103(a) as being unpatentable over Davis et al. in view of Adam et al.
3. Regarding claim 1, Davis teaches management of data traffic in a network having multi-data streams and more particularly to an algorithm and device for fairly allocating available bandwidth to contending connections in a data network, the allocation being based on global queue size. *A method of providing feedback about a contention point to a source (see Fig 2 and col 1-2), the method comprising: executing an explicit rate (ER) calculation only with respect to accounting characteristics of the slowest stream at the contention point; and transmitting a result of the slowest stream ER calculation back to the source, see cols 1-2 and claims 1-11.* Davis however does not teach multicast connection. Adam teaches multicast connection, see Figs 1 & 3 and cols 1-2. The multicast connection serves to provide a more memory efficient and simpler scheduling algorithm for reading cells from the buffer manager. Therefore, it would have been obvious to one of ordinary skill in the art to include the multicast system as taught by

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Adam within Davis that would serve to provide a more memory efficient and simpler scheduling algorithm within Davis's device.

4. Regarding claims 2 & 4, The method according to claim 1, wherein the multicast connection is set up as an asynchronous transfer mode (ATM) available bit rate (ABR) connection, and said step of transmitting includes writing ER calculation results in resource management (RM) cells flowing towards the source. Davis clearly recites these limitations, see col 1 lines 30-50.

5. Regarding claim 4, *the contention point includes a **memory buffer** for storing cells received from the source in a temporally ordered linked list; multicasting is effected by **copying cells** from the linked list to ports associated with the various multicast connection streams, and a **read pointer** is maintained for each stream to provide an **index** into the linked list and said step of identifying the slowest stream includes identifying the read pointer associated with a temporally earliest cell in the linked list.*

Davis teaches management of data traffic in a network having multi-data streams and more particularly to an algorithm and device for fairly allocating available bandwidth to contending connections in a data network, the allocation being based on global queue size. Davis does not teach copying of cells and the use of a read pointer for indexing of each of the bit streams. Adam teaches copying of cells and the use of a read pointer for indexing of each of the bit streams, see col 1 lines 5-60 and col 5 lines 45-67 and Figs 2 & 3 and col 6. The use of a reader pointer helps to facilitate enqueueing and dequeueing for the multicast cells within the shared memory. Thus incorporating the read pointer with indexing into the linked list as taught by Adam within Davis would help

to facilitate enqueueing and dequeueing of the desired cells from shared memory queues. Therefore, it would have been obvious to one of ordinary skill in the art to include the multicast system with the read pointer and indexing capability as taught by Adam within Davis.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Raj K. Jain whose telephone number is 571-272-3145. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi Pham can be reached on 571-272-3179. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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April 25, 2007

Raj K. Jain

Raj K. Jain

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